

Enabling
Digital
Transformation



Case Studies



Manufacturing



Egypt, North Africa & Levant



Installation and Services for the Sukari Gold Mine Solar Power Plant



Project

Installation and Services for the Sukari Gold Mine Solar Power Plant

Client

Centamin plc

Partner(s)

juwi

Project Location

Eastern Desert, Egypt

Project Description

Centamin plc has awarded juwi and Giza Systems the engineering, procurement and construction (EPC) contracts for its 36 MW solar farm and 7.5 MW battery-energy storage system at the Sukari gold mine – the world's largest hybrid project at an off-grid mine

Benefits to Client

- Reduced diesel oil consumption by more than 22M litres per year
- Reduced Carbon emissions by more than 60,000 tonnes CO₂-e per year
- Increased reliability of the power system
- Reduced operating costs

Scope

In partnership with juwi, Giza Systems was awarded the engineering, procurement and construction (EPC) contact for the Sukari gold mine 36 MW solar farm and 7.5 MW battery-energy storage system. Giza Systems scope of work covers the installation of the 36 MW Sukari solar plant.



Firefighting Network at Schneider Electric Factory in Badr City

Project

Firefighting Network at Schneider Electric Factory in Badr City

Client

Schneider Electric

Consultant

KEM Consultant Company

Project Location

Badr City, Egypt

Project Description

GSEC was awarded the project to renovate the firefighting network at the Schneider Electric factory located in Badr City.

Benefits to Client

- Safeguarding humans and assets against fire hazards
- Increasing reliability and responsiveness of the network
- Optimizing safety standards

Scope

Giza Systems Electromechanical was awarded this project to supply, install and commission all firefighting network components, including pumps, pipes, valves and sprinklers, to the Schneider Electric factory in Badr City.

AI Ezz Dekheila Steel (EZDK)

Project

Alpha Server
Replacement by
Virtualization

Client

AI Ezz Dekheila Steel
(EZDK)

Project Location

Egypt

Project Description

Replacement of two Alpha server systems with virtual machines that run on the latest hardware technology, so EZDK could still use the same applications. The solution addressed the core of the problem and eradicated it from its root.

Benefits to Client

- Saving the existing investments in the applications
- Saving the existing investments in staff training and preserving staff expertise
- Minimizing down time during the replacement period compared to any alternative solution
- Making use of the latest technology in the hardware arena, through the following:
 - ✓ Increasing availability due to redundant components and more reliable parts
 - ✓ Increasing storage capacity
 - ✓ Enhancing performance
 - ✓ Enriching features
 - ✓ Increasing expandability
- Avoiding any additional replacements or modifications of any other systems rather than SMP and LAB, rendering it the most economical and practical replacement of LAB and SMP



Al Ezz Dekheila Steel (EZDK)...

Cont'd

Project

Alpha Server Replacement
by Virtualization

Client

Al Ezz Dekheila Steel
(EZDK)

Project Location

Egypt

Project Description

Replacement of two Alpha server systems with virtual machines that run on the latest hardware technology, so EZDK could still use the same applications. The solution addressed the core of the problem and eradicated it from its root.

Scope

- Hardware replacement of two Alpha systems with brand new HP servers running Windows 2003
- Software migration to the new platform
- Migration of software – including the Operating Systems and the applications – from old Alpha servers to the new servers
- Securing communications with other systems
- Reconfiguration of software to be able to seamlessly communicate with other systems; none of the operators and users had to change any of their operation steps
- The new solution came with many enhancements in the capacity, performance and flexibility of the operation; these enhancements were to be noticed during virtual systems startup, applications startup, as well as normal operation activities



Egyptian Propylene & Polypropylene Company

Project

Transmission and Distribution Solutions

Client

Egyptian Propylene & Polypropylene Company

Project Location

Egypt

Project Description

Giza Systems was awarded the project to implement electrical works for the benefit of the Egyptian Propylene & Polypropylene Company.

Benefits to Client

- Efficient and optimized services
- Complete modification of interconnection cables
- Enhance technical specs and reliability of pumps
- Excellent configuration flexibility and centralization of maintenance

Scope

Design, supply, installation, testing & commissioning of two MCCs and LV substations that will work on pump-feeding a number of tanks located in the client's factory.

El Baida Textile



Project

Replacement of 4 Burners and Burner Management System Project

Client

El Baida Textile

Project Location

Kafr El Dawar, Egypt

Project Description

Giza Systems was commissioned to replace four Mazut burners with four natural gas burners.

Benefits to Client

- Enhancing operations and optimizing cost effectiveness
- To yield the desired production rate of 50 tons/hour

Scope

- Design, engineering, procurement, installation, testing and commissioning of all the required equipment and systems for a wide range of services and solutions to ensure the development and reinforcement of the plant
- The replacement of the burners entailed modifications to the control valves and instruments, as well as the set-up of a Burner Management Control System at El Baida textile power plant

Ghalioun Fish Farm

Project

Life and Property Safety Systems

Client

Guangdong Evergreen Feed Industry Co. Ltd

Project Location

Berkat Ghalioun, Kafr El-Sheikh, Egypt

Project Description

Giza Systems Electromechanical Company was awarded the implementation of life and property safety systems for the Ghalioun fish farm, including its feed and processing factory.

Benefits to Client

- Optimum solution of a firefighting network offered for industrial applications
- Fast track project execution
- Reliability and best protection of the proposed firefighting system
- Successful handing over to the client

Scope

Sourcing, installation, commissioning, testing and startup of the fire alarm and firefighting systems in the feed and processing factories. The implementation included the deployment of the following:

- Firefighting network (pumps, pipes, valves, FHC, Siamese connection)
- Fire Alarm System (smoke and heat detectors, call point, bells, auto dialer, horn, control panels)



Henkel Plant

Project

Programmable Logic
Controller

Client

Henkel

Project Location

Egypt

Project Description

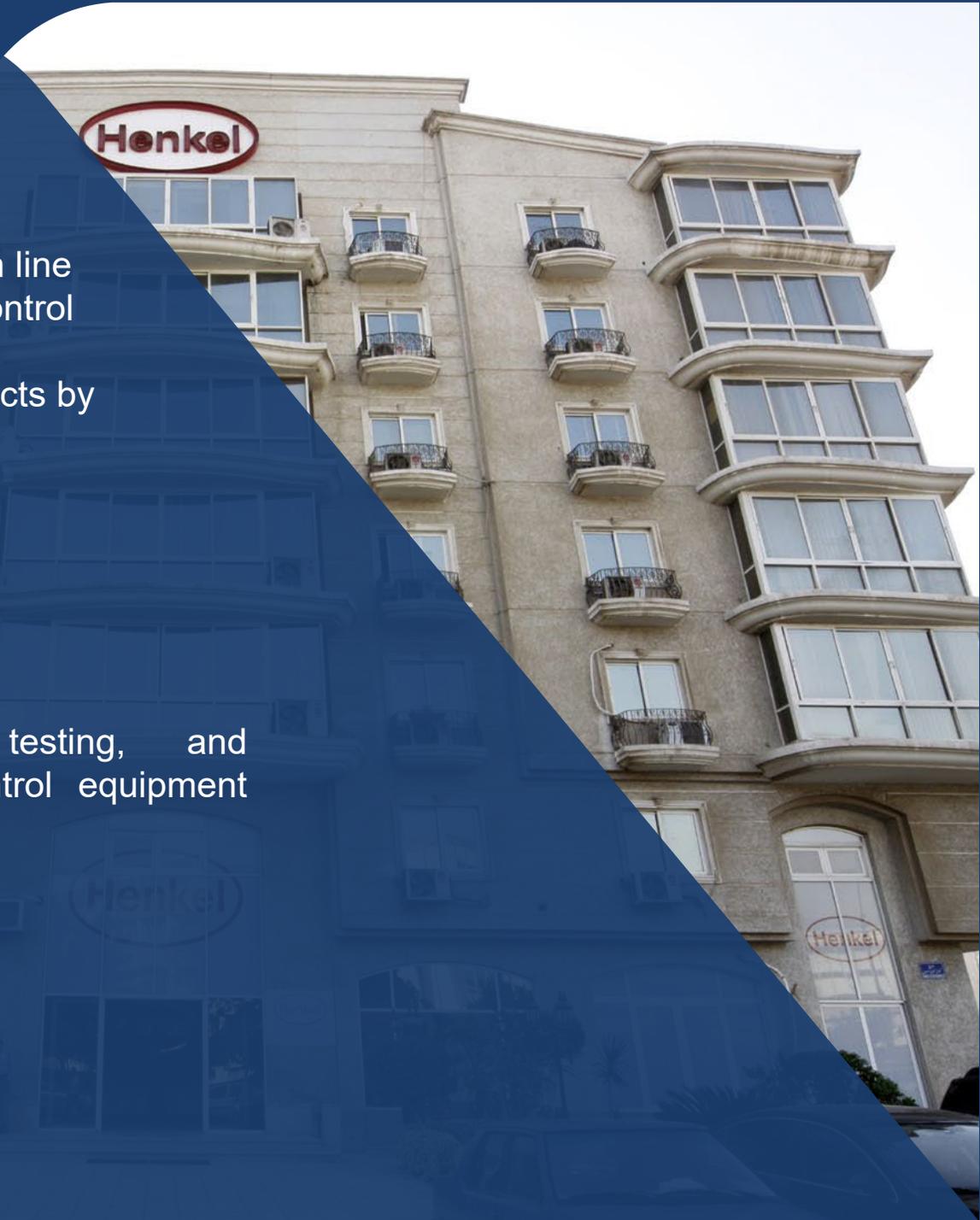
Giza Systems was selected for the setup of Automation & Control Systems for Henkel's new liquid detergent plant in Cairo.

Benefits to Client

- Provide full management of production line (batch control) with recent required control philosophy
- Increase time-to-market for new products by 25%
- Ensure full automation and control
- Provide simplified interfaces with user experience optimization
- Achieve cost reduction

Scope

Supply, installation, supervision, testing, and commissioning of automation and control equipment within the required time.



PepsiCo Factory

Project

Integrated Life Safety and Security Systems

Client

PepsiCo International

Project Location

Egypt

Project Description

Giza Systems was awarded the project to implement life safety, security, and access control systems.

Benefits to Client

- Increase in the level of reliability and comfort
- Saving time and money

Scope

- Fire Alarm System
- Camera Surveillance System
- Access Control System



KSA

Ma'aden Mine & Alumina Project

Project

Completion of Ma'aden's Mine and Alumina Refinery Project

Client

Ma'aden

Project Location

Ras Al Khair, KSA

Project Description

Giza Systems was awarded the Ma'aden Mine and Alumina Refinery joint venture. It overcame a set of challenges ranging from a compressed time schedule to late changes in vendor design and the interfacing with multiple EPCs.

Benefits to Client

- Profitably produce aluminum for domestic and international markets
- Facilitate the development of domestic downstream industries
- Maximize the value of mineral resources
- Reliable supply of quality products

Scope

Vertically integrate the aluminum complex through ensuring the effective installation and safe implementation of the following:

- Honeywell's automation system Experion Process Knowledge System (EPKS)
- Safety Manager (SM)
- Manufacturing Execution System (MES)
- Advanced Regulatory Control (ARC)
- Advanced Process Control (APC)
- Operator Training Simulator (OTS)
- Rockwell Programmable Logic Controllers (PLC)



Ma'aden Mine & Alumina Project... Cont'd

Project

Completion of Ma'aden's Mine and Alumina Refinery Project

Client

Ma'aden

Project Location

Ras Al Khair, KSA

Project Description

Giza Systems was awarded the Ma'aden Mine and Alumina Refinery joint venture. It overcame a set of challenges ranging from a compressed time schedule to late changes in vendor design and the interfacing with multiple EPCs.

Scope Cont'd

Process Control Works

- Installation of around 150 cabinets in substations
- Installation of technical work stations all over the site
- Installation of network and connecting all substations to CPB
- Support HDEC, Samsung and Outotec in field instrument loop testing (around 10,000 field instruments)
- Support HDEC, Samsung and Outotec in the drive loop testing (around 1,000 drives)
- Implement corrective action requests before commissioning starts (around 6,000 requests)



Sulfuric Acid Plant

Project

Fire Fighting System
Project

Client

Scientific and
Medical Equipment House
(SMEH)

Project Location

Dammam, KSA

Project Description

Giza Systems
Electromechanical
Company was awarded the
installation of an integrated
firefighting system at the
Sulfuric Acid Plant with
production capacity of
100,000 MT per year.

Benefits to Client

- Ensure enhanced reliability and protection of the plant
- Secure the plant from explosive and toxic gases
- Expand firefighting infrastructure in the Saudi manufacturing sector

Scope

Design, supply, review, installation and handing over of the complete firefighting works including a state-of-the-art deluge system used in conjunction with foam concentrate for better control of fire spread. The deluge system is designed and used to fight fires in high hazard areas, where rapid fire spread is a major concern.





West, East & Central Africa

Mumias Sugar Company

Project

Distributed Control System (DCS)

Client

Mumias Sugar Company Limited

Project Location

Nairobi, Kenya

Project Description

Giza Systems was awarded the project for the maintenance of Distributed Control System (DCS) at the client's power plant and sugar factory.

Benefits to Client

- Optimize the automation of internal processes
- Control and monitor manufacturing processes
- Reduce costs
- Decrease energy consumption
- Eliminate environmental concerns

Scope

The maintenance of the existing Honeywell DCS service. The scope comprised the following:

Connecting the DCS to a group of sensors, actuators and other control systems using set-points defined by operators

Controlling the flow of material through the plant

Ensuring the proper functioning of DCS



Tata Chemicals

Project

Fire Suppression System

Client

Tata Chemicals

Project Location

Kenya

Project Description

Giza Systems was assigned the project for the implementation of the new Fire Suppression System in Tata Chemicals Kenya premises.

Benefits to Client

- Optimize safety measures at the facility
- Support the efficiency of processes and standards at the factory
- Further contribute to the transformation of Kenyan manufacturing infrastructure

Scope

Design, supply, installation, testing and commissioning of the Fire Suppression System. The scope encompassed streamlining the engineering process and ensuring that compatibility and flexibility are incorporated in the integration process.



Wrigley Confectionery Facility

Project

Fire Alarm Solutions
and Building
Management
Systems (BMS)

Client

Wrigley EA

Project Location

Nairobi, Kenya

Project Description

Giza Systems Kenya
was contracted to
install fire alarm
solutions and
Building
Management
Systems (BMS).

Benefits to Client

- Optimize operational efficiencies
- Reduce costs
- Eliminate environmental concerns
- Enhance the automation of internal processes
- Reduction of energy consumption by 40 percent

Scope

The installation of Fire Alarm and Building Management Systems (BMS). The scope includes the automation of the facility to support full management from a single control center.





Gulf

Unitech

Project

Supervisory Control and Data Acquisition (SCADA)

Client

Unitech Qatar

Project Location

Qatar

Project Description

Giza Systems was awarded the venture for the installation of Emergency TFS and the improvement of internal piping.

Benefits to Client

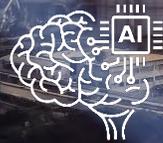
- Enhance operational efficiencies
- Improve water network performance
- Minimize troubleshooting and maintenance time
- Secure stability

Scope

Supply, design, engineering, procurement, installation, training, testing, commissioning, and start-up of Emergency TFS, along with several internal piping improvements.



Thank You!



Giza Systems, a leading digital transformation enabler and systems integrator in the MEA region, designs and deploys industry-specific technology solutions for asset-intensive industries such as the Telecoms, Utilities, Oil & Gas, Smart Mobility and other market sectors. Giza Systems helps its clients streamline their operations and businesses through their portfolio of solutions, managed services, and consultancy practice. Giza Systems' team of 2400+ professionals are spread throughout the region with anchor offices in Cairo, Riyadh, Dubai, Doha, Nairobi, Dar es Salaam, Kampala and New Jersey, allowing the Company to service an ever-increasing client base in over 40 countries. For more information, please visit <http://www.gizasystems.com>.